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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/697,259 | 10/26/2000 | Antulio Tarazona | 99B140 | 3861 |

20411 7590 11/24/2003
THE BOC GROUP INC
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EXAMINER

KRISHNAMURTHY, RAMESH

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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3753

DATE MAILED: 11/24/2003

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/697,259

Applicant(s)

TARAZONA ET AL.

Examiner

Ramesh Krishnamurthy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 6 is/are rejected.
- 7) ☒ Claim(s) 7 - 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/02/2003 has been entered.

Claims 1 and 3 – 11 are pending.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang (4,275,759).

Huang discloses a valve housing having an inlet (15) and spaced therefrom an outlet (27), a passageway extending between the inlet and the outlet, and means (20, 14) located in the passageway for controlling the flow of fluid between the inlet and the outlet, the means including a valve assembly (20) movable in a direction along a longitudinal axis of a co-operating valve seat (14) between a first open and a second closed position, in which magnetic means are provided (via cooperation between the element (20) and element (19)) for biasing the valve towards a closed position, wherein at least a portion of the valve assembly (20) is in the form of or incorporates a permanent magnet (Col. 2, lines 13 – 15) and a further magnet (19) in the form of a

permanent magnet is located adjacent the valve seat, and said valve assembly is configured to transition between the closed and open positions based on pressure differentials arising between the fluid inlet and the outlet.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 4,275,759) as applied to claims 1 and 3 above.

Regarding claim 4, it is noted that the at time the invention was made, it would have been an obvious matter to a person of ordinary skill in the art to have used an electromagnet in place of the permanent magnet in the device of Huang, since the examiner takes Official Notice of the equivalence of Permanent magnet and an Electromagnet in providing a magnetic biasing force and selection of one of these two

known magnetic sources to provide a biasing force would be within the level of ordinary skill in the art. It is further noted that the applicant fails to disclose the importance/reason(s) for the further magnet being an electromagnet.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (4,275,759) as applied to claims 1 and 3 above and further in view of Grittmann et al. (US 5,515,223).

The patent to Huang discloses the invention claimed with the exception of disclosing the valve seat to be made of a magnetic material.

Grittmann et al. discloses a check valve in which (Fig. 4, Col. 4, lines 29 – 39) a valve seat (25) made of magnetic material is provided to ensure that the magnetic field on the valve element is strong enough to attract the valve back to the valve seat when the opposing force due to fluid flow is minimal.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in the device of Huang a valve seat made of magnetic material for the purpose of ensuring that the magnetic field on the valve element is strong enough to attract the valve back to the valve seat when the opposing force due to fluid flow is minimal as recognized by Grittmann et al..

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (4,275,759) as applied to claims 1 and 3 above and further in view of Gast et al. (US 4,392,632).

The patent to Huang discloses the claimed invention with the exception of disclosing the valve assembly to include a spherical seal pad that engages the valve seat.

Gast et al. discloses a magnetically actuated valve in which the valve assembly includes a spherical pad (15) for the purpose of engaging the valve seat and providing good sealing besides allowing easy replaceability of the pad.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided in Huang a spherical pad in the valve assembly (20) for the purpose of engaging the valve seat and providing good sealing besides allowing easy replaceability of the pad as recognized by Gast et al.

9. Claims 7 – 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Moore et al., Racine et al. and Yajima disclose various arrangements of magnetically biased check valves.

Response to Arguments

11. Applicant's arguments with respect to claims 1 - 11 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramesh Krishnamurthy whose telephone number is (703) 305 - 5295. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Scherbel, can be reached on (703) 308 - 1272. The fax phone

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number for the organization where this application or proceeding is assigned is (703) 872 - 9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0861.

A handwritten signature in black ink, reading "Ramesh Krishnamurthy". The signature is written in a cursive style with a large, stylized initial 'R'.

Ramesh Krishnamurthy
Examiner
Art Unit 3753
November 17, 2003